



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,464	03/24/2002	Thomas Benthien	24448-0030	9481

7590 03/22/2005

Greenblum & Bernstein PLC
1950 Roland Clarke Place
Reston, VA 20191

EXAMINER

LAVILLA, MICHAEL E

ART UNIT PAPER NUMBER

1775

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

09/937,464

Applicant(s)

BENTHIEN ET AL.

Examiner

Michael La Villa

Art Unit

1775

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 February 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) a set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The reply was filed after the date of filing a Notice of Appeal, but prior to the date of filing an appeal brief. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: 53,54 and 57-59.
Claim(s) objected to: _____.
Claim(s) rejected: 27-29,34,35,37-42,55 and 56.
Claim(s) withdrawn from consideration: 44-52.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☒ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☒ Other: Note the attached PTO-892.

La Villa 3/17/05

Continuation of 11. does NOT place the application in condition for allowance because: With respect to the section 112, second paragraph rejection, the rejections of the Office Action mailed on 26 November 2004 are withdrawn except for the specific rejections of Claims 55 and 56. It remains unclear whether these claims specify that individual particles must comprise at least two transition metal oxide of which each transition metal oxide exhibits catalytic activity or whether these claims specify that the particles must comprise at least two types of particles each type having at least one transition metal oxide which exhibits catalytic activity. With respect to the section 103 rejection over JONSCHKER of the Office Action mailed on 26 November 2004, applicant traverses on two central grounds. Firstly, applicant contends that titanium dioxide in general is not inherently catalytic, although specific crystalline forms may be. Secondly, applicant argues that JONSCHKER does not teach oxidative or photocatalytic benefits in its technological applications. Applicant's contentions with respect to the inherent photocatalytic nature of titanium dioxide overlook the presence of these highly active forms of titanium dioxide in ordinary titanium dioxide. See Frazer, "Titanium Dioxide: Environmental White Knight," Environmental Health Perspectives, Volume 109, No. 4 (April 2001), A 174. Frazer teaches that ordinary titanium dioxide has photocatalytic properties, notwithstanding applicant's arguments that these properties may be attributable to certain crystalline forms. Hence, applicant's argument on the first grounds is not persuasive. The argument with respect to the second ground is also not persuasive. Accepting applicant's perspective that JONSCHKER is indifferent to achieving photocatalytic effects in its materials, the claimed requirement of catalytic activity is satisfied when titanium dioxide is used and use of titanium dioxide is obvious for the reasons already argued. Hence, these rejections are maintained.



3/17/05